Inspection and Maintenance Review Committee

More Stringent ASM Cutpoints

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California Air Resources Board

Overview

- Background
- Options
- Impact
- Pros/Cons
- Next Steps

Planning Background

- 2004 Draft ARB/BAR Report recommended evaluating more stringent post-repair cutpoints.
- Future 8-hour and PM2.5 SIPs need reductions from all sources to meet health-based air quality standards.

Cutpoint Background

- Current ASM cutpoints divided into 25 emission standard categories.
- Each emission standard category driven by dirtiest vehicle.
- ARB/BAR proposed 2 analysis options.
- Sierra Research analyzed the benefits of each option for 3 cutpoint scenarios.

Cutpoint Options

- Post-Repair Cutpoints: More stringent vehicle-specific cutpoints for vehicles that fail the ASM smog check inspections.
- Lower Initial Cutpoints: More stringent vehicle specific cutpoints for all ASM smog check inspections.

Sierra Research Analysis

- California vehicle group failure rates compared to Arizona and Wisconsin failure rates.
- Vehicle groups with lower than average failure rates compared to Arizona and Wisconsin were identified.
- Cutpoint levels were lowered based on pollutant and test mode.
- Passing vehicle ASM results confirmed revised cutpoint levels.

Failure Rate Impact

- Current failure rate: 10.4%
- Post-repair cutpoints failure rate: 10.4%
- Lower initial cutpoints failure rate:
  11.9% to 12.8%

Emission Benefits

Post-Repair Cutpoints

- 4.8 tpd to 6.3 tpd ROG + NOx

Lower Initial Cutpoints

- 5.5 tpd to 7.8 tpd ROG + NOx

Cost Effectiveness

Post-Repair Cutpoints

- $3200/ton to $4200/ton ROG + NOx

Lower Initial Cutpoints

- $11,000/ton to $11,800/ton ROG + NOx

Pros/Cons Post-Repair Cutpoints

Pros

- Cost effective.
- Significant emission reductions.

Cons

- Statutory change required.
- Increased pre-inspections likely will erode emission benefits.
- Complicates smog check program.
- Software update required.

Pros/Cons Lower Initial Cutpoints

Pros

- No statutory change required.
- Approach consistent with current practices.
- Significant emission reductions.
- Cost effective.
- More cars are repaired.

Cons

- Software update required.

Findings

Lower Initial Cutpoints Preferred Approach

- Easier to implement.
- Consistent with current program.
- Identifies and repairs more cars.
- Cost effective emission reductions.

Next Steps

- BAR develops regulations to lower initial cutpoints.
- BAR modifies software to allow for vehicle group specific cutpoints.

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